

ABSTRACT OF THE DISCLOSURE

A low cost method of fabricating bipolar plates for use in fuel cells utilizes a wet lay process for combining graphite particles, thermoplastic fibers, and reinforcing fibers to produce a plurality of formable sheets.

- 5 The formable sheets are then molded into a bipolar plates with features impressed therein via the molding process. The bipolar plates formed by the process have conductivity in excess of 150 S/cm and have sufficient mechanical strength to be used in fuel cells. The bipolar plates can be formed as a skin/core laminate where a second polymer material is used on
- 10 the skin surface which provides for enhanced conductivity, chemical resistance, and resistance to gas permeation.